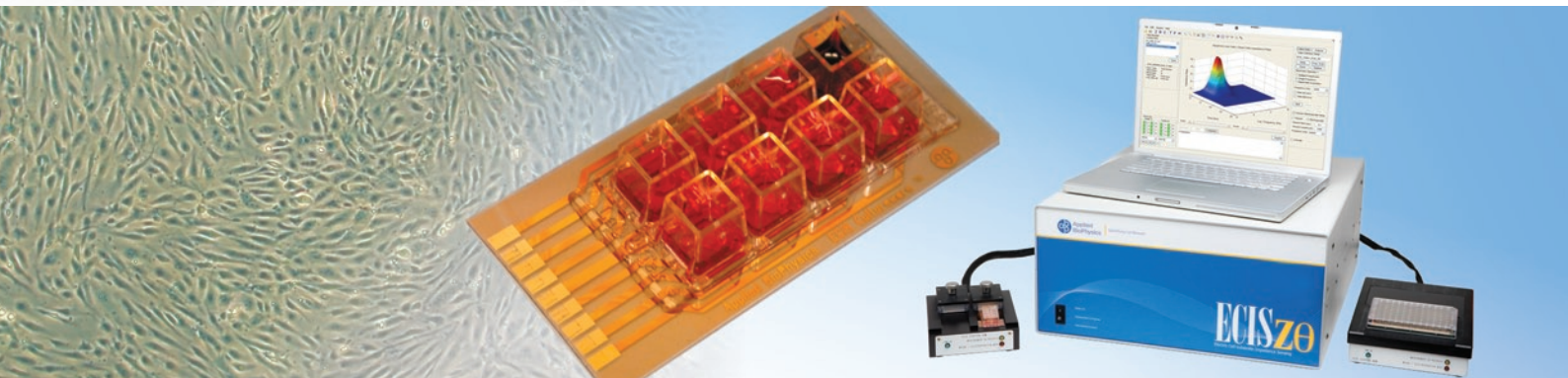


In cooperation with



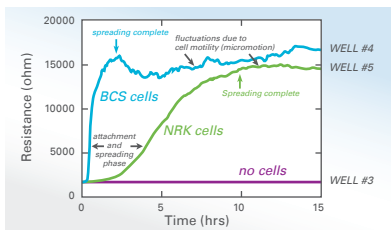
Electric Cell Substrate Impedance Sensing (ECIS™)

A Morphological Biosensor for Cultured Cells

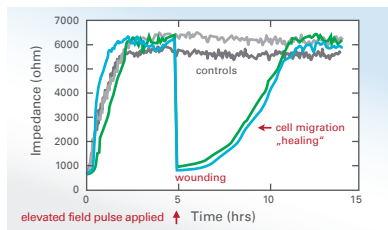


- ✓ Non invasive cell-based assays in culture medium
- ✓ Measurement of changes in cell morphology
- ✓ Multiple, real-time measurements

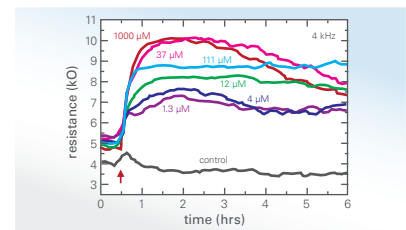
Applications:



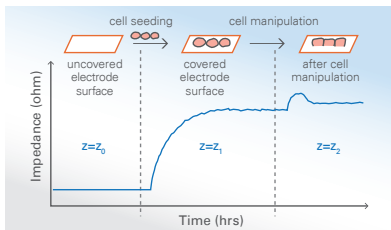
- Cell attachment & migration



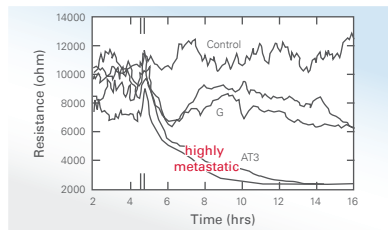
- Wound healing



- Signal transduction



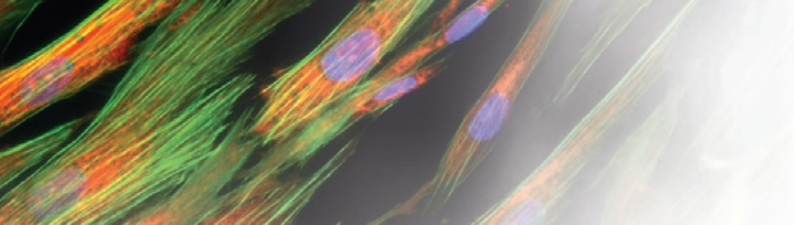
- Measurement & modelling of endothelial cell barrier function



- Measurement of metastatic potential



- Cell behaviour under flow



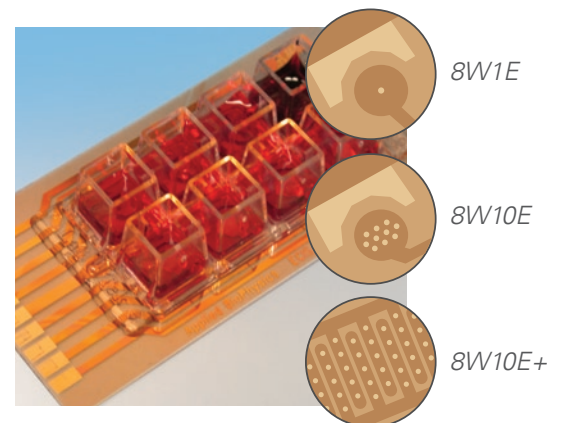
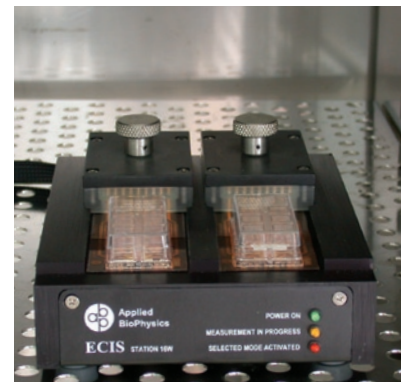
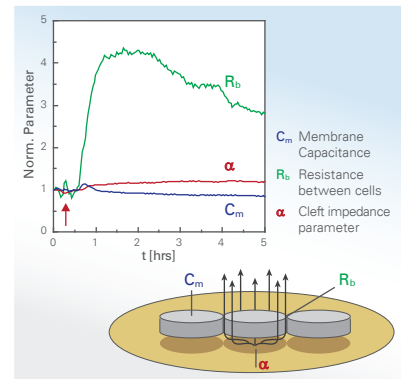
Electric Cell Substrate Impedance Sensing (ECIS™)

Cells in electric fields

ECIS represents a non-invasive approach of monitoring living cells *in vitro*. It measures the change in impedance of a small electrode to AC current flow over time.

There are two major systems: ECIS Model Z and ECIS Model Z θ (theta). ECIS Z monitors the impedance of small 250-micrometer diameter electrodes used as substrates for cell growth. ECIS Z θ interprets the complex impedance as both resistance and capacitance and can report these values as well as the simple impedance. These data can be further refined using a model that gives back information on the barrier function of cell layers (R_b), the spacing beneath the cells (α), and capacitance of the cell membrane (C_m).

Both systems are available with a 2x8 well or a 96 well array station for high throughput applications. Both array stations are hosted in an incubator, so cells are kept under ideal cultivation conditions – at all times.



For more than 500 scientific publications using the ECIS technology please visit www.biophysics.com

Equipment		Impedance arrays					
ECIS Model Z	71610	8W1E	6 pcs.	70001	8W1E (DD)	6 pcs.	70003
ECIS Model ZTheta	71611	8W10E	6 pcs.	70010	96W1E	5 pcs.	70096
16 well holder	71612	8W10E+	6 pcs.	70040	96W10E	5 pcs.	70095
96 well holder	71614	8W2x1E (Medusa)	6 pcs.	70002	8W1E (PCB)	6 pcs.	70004
Elevated field module (16 w)	71613	ECIS Flow Array	5 pcs.	70101	8W10E (PCB)	6 pcs.	70011
Elevated field module (96 w)	71615						
Flow module	71001						